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## Self-Advocacy Skills in Children who are Deaf or Hard of Hearing: Listening and Spoken Language Teacher Perceptions in Preschool through Third Grade Settings

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Self-Advocacy Skills in Children who are Deaf or Hard of Hearing: Listening and Spoken  
Language Teacher Perceptions in Preschool through Third Grade Settings  
by  
Ariel Hendrix

A project submitted in partial fulfillment of the requirements for the degree  
of

MASTER OF EDUCATION  
in  
Communicative Disorders and Deaf Education

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Logan, Utah

2015

## **Introduction**

Self-advocacy is an essential component of social-emotional skill development (Scheele, L., & Clark, G., n.d.; Luckner & Sebold, 2013). The ability to recognize one's needs, and then utilize effective self-advocacy skills to meet those needs are characteristics considered to contribute to successful development in this area. Young children with disabilities require strong self-advocacy and self-determination skills, particularly as they transition from preschool into mainstream kindergarten settings. Children should learn that they have a right and a responsibility to access the same educational experiences as their peers, and should be given the tools to effectively identify and implement appropriate self-advocacy strategies within the classroom (Anderson & Arnoldi, 2011). Age-appropriate advocacy skills can and should be introduced within early intervention home-based programs and within the preschool classroom to establish the foundations for future growth and development.

Because of early identification, advanced hearing technology (e.g., digital hearing aids, cochlear implants, FM systems), and early intervention services, many children who are deaf or hard of hearing (DHH) use listening and spoken language (LSL) as their primary mode of communication and attend mainstream educational settings (Meinzen-Derr, Wiley, & Choo, 2011; Yoshinaga-Itano, 2003). It is important for children who are DHH to obtain self-advocacy skills during their preschool experience and to maintain them as they transfer into mainstream academic settings. Self-advocacy skills upon entering the mainstream include the ability to understand and explain hearing loss, seek clarification for things not understood, initiate and engage in social interactions with peers, and maintain hearing technology as appropriate (Rugg & Donne, 2011; Luckner, 2002; Anderson & Arnoldi, 2011). These skills are important for

success in the classroom in a variety of settings, including both teacher-directed and child-centered activities.

The topics of self-advocacy and self-determination have been well researched within the broader population of individuals with disabilities, however, the research is much more limited within the population of students who are DHH (Luckner & Sebold, 2013), particularly preschool-age children who utilize the LSL communication modality. As acquisition and maintenance of these skills has both short and long-term effects on the social and academic success of children who are DHH, research in this area will lead to better interventions and skill instruction at the early childhood level, and will increase understanding of the importance of self-advocacy skill acquisition at a young age. This cross sectional survey study will examine the self-advocacy skills of children who are DHH who attend a self-contained preschool or kindergarten classroom or an inclusive kindergarten or first-grade classroom. Participants will respond to Likert-scale self-advocacy ratings and to open-ended questions regarding their perceptions of the self-advocacy skills of their students who are DHH.

### **Self-Advocacy**

Psychologists Deci and Ryan (1985), who are often credited for their extensive research on intrinsic and extrinsic motivation in human behavior, developed the self-determination theory. The self-determination theory considers individuals' natural development patterns and innate psychological needs that together construct the foundation for their level of self-motivation and personality traits, in addition to the external circumstances that either foster or inhibit the developmental process (Ryan & Deci, 2000). As part of self-determination, Deci & Ryan (2000) claim that "human beings can be proactive and engaged or, alternatively, passive and alienated" and, in addition to the influence of biological factors, credit either type of development to the

structure of an individual's social environment (p. 68). Additionally, self-determination refers to an individual's level of autonomy and ability to self-regulate behavior (Heller et al., 2011).

Definitions of self-determination are generally expansive and, depending on the age and developmental level of the individual, may also include choice and decision-making, planning, and goal setting (Heller et al., 2011). Fiedler & Danneker (2007) add to the understanding of self-determination by identifying the concept of self-advocacy as one of its component parts. They researched findings on both self-determination and self-advocacy and compared several definitions of the two before establishing a list of common characteristics that serve as an educational definition of the terms:

- “The importance of self-knowledge, identifying one's own likes, dislikes, wants, needs, strengths and limitations;
- the need for autonomy and control in decision making; and
- the significance of having opportunities to express one's needs and interests” (p. 3).

Additionally, Fiedler & Danneker (2007) identified the communication techniques of assertiveness, persuasiveness, and the abilities to negotiate and listen as important components to successful demonstration of self-advocacy. Other researchers have echoed these descriptions and define the self-advocacy component as the ability to identify one's needs as well as the knowledge and capacity to communicate effectively in order to access support to realize those needs (Scheele & Clark, n.d.; Luckner & Sebold, 2013). A demonstration, or lack thereof, of self-advocacy skills has been determined to have an impact across various aspects of an individual's life including, but not limited to: academic performance across all levels including post-secondary education, transition outcomes, employment opportunities, community participation, and overall quality of life (Luckner & Sebold, 2013). Likewise, a sense and

outward demonstration of self-advocacy is highly related to an individual's self-esteem, as those who have attained a high level of self-esteem are more inclined to feel that requiring that their fundamental needs be met by society is their right (Bullard, 2003).

Self-advocacy can be regarded as a continuum of skills that adapt and become more complex throughout one's life. As one may expect, self-advocacy skills at the early childhood level present differently than those at the adolescent and adult levels. While some of the more advanced self-determination and self-advocacy skills would not be considered developmentally appropriate of children during the early years (e.g., goal writing, problem solving, etc.), later attainment and mastery of these skills requires acquisition of age-appropriate self-advocacy skills during early childhood that serve as a strong foundation for skills that become necessary later on in life (Palmer et al., 2013). Although educators within the field of special education typically possess a common understanding of what it means to act as a self-advocate, specific components of self-advocacy expectedly differ when looking closely at younger age groups.

### **Self-Advocacy in Children with Disabilities**

Self-advocacy is considered an important component of social development in school-age students (Bullard, 2003). Generally, the ability to act as an advocate for one's self is regarded as a necessary skill for all individuals, with or without disabilities; however, for individuals with disabilities, attainment of these skills is particularly critical as they impact daily life activities. As an individual with disabilities often requires various accommodations and supports throughout life, it is necessary that these individuals learn the skills to both recognize needed supports and communicate those needs effectively. For a student with disabilities, proper development of these skills may be inhibited by a variety of factors including, but not limited to, language delays and disorders, lack of autonomy or internal motivation, insufficient opportunities to practice

needed skills, and various educational program issues (Sebald, 2013). A student with disabilities can become an effective self-advocate when they have an understanding of their own “likes, dislikes, wants, needs, strengths, and limitations” (Fiedler & Danneker, 2007, p. 3) and when they are given ample opportunities to express each in natural, authentic situations (Schreiner, 2007).

### **Self-advocacy in Children who are Deaf or Hard of Hearing**

For children who are DHH, self-advocacy is considered especially critical, as the broader population is not always understanding of, or accommodating to, their needs (Bullard, 2003). Despite the level and degree of hearing loss, all children who are DHH need to demonstrate the ability to self-advocate across settings and, depending on the severity of the loss, may require additional self-advocacy skills to help meet their individual needs. For example, children who are DHH who utilize LSL require a strong set of self-advocacy skills to ensure proper access to sound, which is key for effective learning. Like children with other disabilities, children who are DHH must know their needs and be able to communicate their needs to those around them (Bullard, 2003).

Children who are DHH often face a variety of factors that may hinder their development of sufficient self-advocacy skills. As hearing loss is a low-incidence disability, and most children who are DHH (95%) are born to hearing parents (Mitchell & Karchmer, 2004), it is reasonable to conclude that these parents often present with a lack of previous experience with hearing loss and may therefore be less knowledgeable about methods for fostering adequate self-advocacy skill development. Another identified inhibiting factor is the delay in language skills or communication modalities that affect the child’s ability to adequately express his needs to others (Sebald, 2013). Further, a common external factor that may account for insufficient self-

advocacy skill development is a child's educational setting and experience. Research has shown that teachers may hold various levels of expectations for demonstration of these skills based on their perception of the individual child's level of self-determination (Sebald, 2013) which likely affects both the quality of skill instruction and the number of opportunities a child may have to practice a needed skill in a supportive environment.

The development, or non-development of adequate self-advocacy skills affects a child's short and long-term performance across a variety of areas. Anderson & Arnoldi (2011) state that a child who is DHH "must have well-developed self-advocacy skills by intermediate grades or he will not be able to access the full educational offerings" (p. 391). In addition to serving as a foundation for acquisition of later developed skills, strong self-advocacy skills acquired in early childhood and maintained throughout an individual's educational experience attribute to continuous success. In the early years, development of self-advocacy skills permits children with hearing loss the freedom to manage their hearing technology as independently as possible, therefore ensuring proper access to sound, allows them to attain full involvement in peer and adult conversations and relationships, and provides them opportunities to practice various skills that are crucial for quality participation in various social and academic experiences. Long-term effects of such skill development can impact success in later schooling and community involvement (Anderson & Arnoldi, 2011) and influence an individual's ability to acquire and maintain employment (Wehmeyer & Palmer, 2003).

For a child who is DHH at the early childhood level, self-advocacy skills can be allotted across three main areas:

- hearing technology management
- proactive listening behaviors, and



- social and academic self-advocacy.

While all are considered developmentally appropriate, these skills cover a spectrum of ability level and, depending on the child and various external factors (e.g., age of identification, early intervention services, previous opportunities to practice self-advocacy skills), may be demonstrated at varying degrees of proficiency and/or consistency. Together, these skills form a basic foundation of self-advocacy for individuals with hearing loss on which additional, more complex skills can one day lie.

### ***Hearing Technology Management***

A fundamental self-advocacy skill set for an individual with hearing loss is hearing technology management. Children who are DHH who utilize LSL require skills specific to their individual type(s) of hearing technology. A preschool-aged child should be taught skills that foster management of hearing technology to ensure consistent access to quality sound input. Children should be taught the importance of constant hearing technology use and should be expected to wear their device without resistance during all waking hours (Anderson, 2011). Likewise, it is necessary that young children learn to carry the responsibility of proper care for their technology. They should be taught how to perform a visual inspection of their technology and to notify an adult of any issues that require necessary attention (e.g., excessive wax, crack in tubing, break in headpiece cable, dead battery, etc.) (Anderson, 2011). In order to maximize quality sound input, it is also important for hearing technology programming to be properly monitored. The Ling 6 sound test serves as a mechanism to check technology function across the range of speech frequencies while targeting the low-frequency sounds (e.g., /m/ and /a/), mid-frequency sounds (e.g., /i/ and /u/) and high-frequency sounds (e.g., /sh/ and /s/). In a Ling test, an adult delivers the six sounds without visual cues and children are responsible to discriminate

and identify the correct sound by repeating the adult. Young children who are DHH should be taught the importance of the Ling 6 sound test and should participate appropriately in the daily task and also remind the teacher to perform one whenever needed. Mastery of this skill serves as a precursor for self-testing with the Ling 6 sounds which can be expected as early as third grade (Anderson, 2011). Additionally, a child who is DHH must learn to feel comfortable putting on and removing their device(s) as necessary, understand how to use a battery tester, the location of replacement batteries, and, if applicable, should be held responsible for charging the classroom or personal FM system at the end of each school day (Anderson, 2011).

### ***Proactive Listening Behaviors***

In addition to management of hearing technology, a demonstration of proactive listening behaviors, or “communication repair” strategies (Anderson, 2011, p. 397) are also necessary for a student to receive adequate access to sound and communicate effectively with both adults and peers. Older students with strong self-advocacy skills demonstrate the abilities to seek clarification of instructions when needed and also know how to position themselves in an area of the classroom that will provide them with a maximum level of communication access (Reed, Anita, & Kreimeyer, 2008). While these skills are expected of older students, they should be taught and fostered in younger students to promote these behaviors in later grades. Additionally, as a proactive listener seeks proper access to sound, they should also learn to manage external factors in their listening environment. A child should be taught to identify sources of excess noise that are inhibiting optimal sound access and to take action to remediate any issue or appropriately seek assistance in doing so.

### ***Social and Academic Self-Advocacy***

As a child learns to properly manage hearing technology and practices proactive listening behaviors, they may also be expected to demonstrate self-advocacy skills in their interactions with both hearing and non-hearing peers and adults. Students should be appropriately engaged in teacher-led discussions and general classroom activities (e.g., eye contact, answer questions when asked, etc.) and should seek appropriate clarification during lessons or conversations as needed. Children who are DHH should also exhibit similar skills during interactions with peers. It is important for children to appropriately engage in peer interactions with peers with and without hearing loss (e.g., initiate play, exhibit age-appropriate social behaviors) and to seek necessary clarification or repetition during such interactions.

### **Self-Advocacy Instruction in the Classroom**

In the early 1990s, IDEA enacted new federal mandates regarding transition planning which prioritized student involvement in its process (Wehmeyer & Ward, 1995) and thus demanded a higher level of outward self-determination and self-advocacy from students with disabilities. Consequently, over the past two decades, this discussion of self-determination and self-advocacy has dramatically increased within the field of special education. Because research has indicated a lack of sufficient self-advocacy instruction as a problem in the education of students with disabilities (Fiedler & Danneker, 2007; Sebald, 2013), and because the promotion of self-determination and self-advocacy skills is now considered best practice in both special education and transition services, self-advocacy instruction should be thoughtfully implemented by all educators into classroom curriculum (Test et al., 2009; Luckner & Sebald, 2013; Wehmeyer et al., 2012).

### ***Barriers to Self-Advocacy Instruction***

In order for an educator to properly approach self-advocacy instruction, it is important to first gain an understanding of some of the factors that may cause limitations in effective instruction. Often, a student with disabilities requires structured support and intervention services that help him/her access curriculum and various social experiences to the greatest degree possible. Although IDEA mandates that students with disabilities be educated within the Least Restrictive Environment (LRE) and hence require additional supports, these students often cultivate passive behavior, or learned helplessness, as a result of highly structured programs where they are not given opportunities to learn and exhibit appropriate levels of autonomy and control (Fiedler & Danneker, 2007). Similarly, Anderson & Arnoldi (2011) state that educators who “take care of students’ accommodations and accessibility needs without directly involving and empowering them are counter-productive to the students’ lifelong success” (p. 391). From this, it is understood that self-advocacy skill development in young children can be inhibited by well-meaning adults who intercede to help in meeting the needs of children with disabilities, resulting in missed opportunities to acquire necessary skills (Scheele & Clark, n.d.).

Additionally, other barriers to effective self-advocacy instruction may be attributed to individual teacher perceptions. A recent study indicated that only 68.4% of surveyed deaf educators incorporate self-determination instruction into their curriculum (Sebald, 2013). The study also indicated that, despite the high priority placed on self-determination and self-advocacy instruction in teacher training programs, there might be a significant gap between the regarded importance of self-determination and the level of instruction time devoted to it (Sebald, 2013). Although teachers of students who are DHH regard self-determination as an important skill, “its value of implementation was not found to be as important” (Sebald, 2013, p. 154). Consideration

of these potential inhibiting factors will lead educators to greater understanding and caution when planning and implementing self-advocacy skill instruction.

### ***Self-Advocacy Instruction Outcomes***

In order for educators to successfully meet the self-advocacy instructional needs of children with disabilities, they must also have a sufficient understanding of the importance of self-advocacy in the immediate and long-term success of their students (Fiedler & Danneker, 2007). Early childhood is considered an appropriate time to devote attention to early foundational self-determination and self-advocacy skills as it gives children with disabilities a “head start on a potentially enhanced quality of life, improved post school outcomes, and increased participation in their current academic programs” (Klienert, Harrison, Fisher, & Kleinert, 2011, p. 17). Providing structured opportunities for children to practice self-advocacy skills directly supports their psychological vitality and therefore a failure to address self-advocacy skill instruction contributes to “students’ lack of psychological vitality and health” (Fiedler & Danneker, 2007, p. 2). Additionally, successful self-advocacy preparation for students who are DHH is necessary to ensure that they are prepared for success in mainstream settings and that they are able to properly access all needed supports and services (Anderson & Arnoldi, 2011). Early childhood educators should devote attention to and provide valuable practice opportunities for early foundational self-determination and self-advocacy skills as these early developmental years typically provide adequate time for children to refine their abilities prior to independence (Palmer et. al, 2013).

To gain a better understanding of the self-advocacy instructional needs of children who are DHH, this study investigated 1) self-contained preschool teacher perceptions of the self-advocacy skills of their students 2) kindergarten through third-grade teacher perceptions of the

self-advocacy skills of their students who are DHH and 3) current self-advocacy instructional methods employed by the classroom teacher.

## **Methods**

### **Participants**

Participants for this study were teachers who provided services to preschool through third-grade students who are DHH.

### **Data Collection**

This study used a cross-sectional survey design, containing both quantitative and qualitative data. A Self-Advocacy Ratings Questionnaire for young children who are DHH was developed, containing Likert-scale ratings of child self-advocacy performance, which was utilized in the descriptive analysis. Following a pilot study with two teachers, the survey instrument collected qualitative data to identify teacher perceptions of child performance and recommendations for promoting growth in the self-advocacy skills of children who are DHH. All participants involved remained anonymous.

### **Procedures**

Teachers employed by the Utah Schools for the Deaf and Blind (USDB) were recruited for study participation. Inclusion criteria were teachers of children who are DHH and who:

- Utilized hearing technology for the development of spoken language
- Had no other co-morbid disabilities that would impact self-advocacy skill development
- Were currently attending preschool through third grade.

To allow for an accurate representation of self-advocacy skills, and to avoid any inaccurately portrayed interruption or advancement of skills due to the transitional adjustment

into a new classroom setting, teachers were asked to evaluate their students 4-6 weeks into the new school year.

Institutional Review Board (IRB) recruitment procedures were followed. Potential participants were informed of the study by the USDB Program Director and were given the option of participating. Teachers were provided with a small gift to motivate study participation and to provide a gesture of appreciation for their time in completing the survey questionnaire on each child in the class from whom parent consent was received. There were approximately 19 teachers who provided either classroom or itinerant educational services to children in preschool through third-grade and were recruited for study participation.

### **Data Analysis**

Data analysis included both quantitative and qualitative findings. Simple statistics were used to describe quantitative survey results. A content analysis was used to quantify and describe qualitative segments of the survey. A coding sheet was developed to enter and analyze the data from the survey. Data entry accuracy was verified by having two research assistants enter and cross-check all survey entries.

## **Results**

### **Survey Demographics**

Nineteen survey questionnaire packets were distributed to teachers employed by the USDB who served children who are DHH in LSL settings. Of the 19 teachers asked to participate, 12 completed and returned quantitative surveys on students in their class, resulting in a 63% return rate. Survey questionnaires completed by preschool through third-grade teachers revealed survey data on 64 students. Of those students, 70% (n=45) were in preschool, 20% (n=13) were in kindergarten, and 9% (n=6) were in the first through third-grade range.

On each survey, teachers indicated demographic information for their students. Of the demographics reported, 50% of students were male, 44% were female and 6% were not indicated. Ten students had learned English as a second language and 48 students were native English speakers. Teachers were also asked to indicate whether their students had received previous services. Preschool teachers reported that 36% of their students had received 0-3 services, 11% had not, 4% were unknown and the remaining 49% of students were not indicated. Kindergarten teachers indicated that 69% of their students received 0-3 services and 100% had attended preschool. First through third-grade teachers reported that 33% received 0-3 services, 83% attended preschool and 83% attended kindergarten. For this age group, the remaining students are accounted for with 'no response'. Of the total students, 48% wore hearing aids, 39% had a cochlear implant in their right ear and 42% in their left and 2% wore a bone-anchored hearing aid (BAHA). Data on FM system use is reported later.

## **Teacher Perceptions of Self-Advocacy Skills**

### **Hearing Technology Management.**

Teachers were asked to evaluate the self-advocacy skill level of their students with hearing loss by indicating the frequency that their students exhibited certain hearing technology management skills using a five-point Likert-scale. Results were divided into three separate age groups as outlined below.

#### ***Preschool***

Table 1 shows results of hearing technology management components at the preschool level. While 87% were observed to wear their hearing technology consistently in the educational setting, without resistance, teachers reported that only 44% were able to take their technology on/off without assistance and 42% were able to replace their technology if it falls off. Teachers



reported that 46% of preschool students mostly or always notified an adult of trouble with their technology. While willingness to engage in the Ling 6 test, or similar assessment of auditory function, showed the highest percentage, with 89% of preschool students always participating, only 20% of students mostly or always reminded their teacher to perform a listening check, while 33% never did. When it comes to the more technical aspects of hearing technology management (e.g., battery charge check and replacement and visual inspection of technology), very few preschool students participated in those aspects. See Table 1 for full results.

Table 1

*Frequency of Hearing Technology Management Skills Exhibited by Preschool Children*

		Never	Seldom	Sometimes	Mostly	Always	DK
Preschool n = (45)	Wears technology	0%	0%	2%	9%	87%	2%
	Takes technology on/off	13%	9%	13%	13%	44%	7%
	If technology falls off, will replace	13%	7%	11%	16%	42%	11%
	Notify teacher of technology trouble	11%	13%	18%	24%	22%	11%
	Checks battery	40%	2%	16%	2%	9%	31%
	Replaces battery	36%	11%	9%	4%	4%	36%
	Visual inspection of technology	38%	13%	9%	2%	13%	24%
	Engages in Ling 6	4%	0%	0%	7%	89%	0%
	Reminds teacher of listening check	33%	9%	20%	16%	4%	18%

***Kindergarten***

Table 2 indicates the results of hearing technology management in children of kindergarten age. As expected, kindergarten students demonstrated higher performance across all areas of hearing technology management than the preschool students. Teachers indicated that 100% of their kindergarten students either mostly or always wore their hearing technology, were able to take their technology on or off without assistance and consistently participated in the Ling 6 sound test. Sixty-nine percent of students always independently replaced their hearing

technology if it fell off, while 46% consistently notified a teacher of trouble with their hearing technology. Similarly to above, the aspects of hearing technology management that required a higher level of skill level indicated a lower number of students able to complete these tasks: checks battery (31% always), replaces battery (38% always), and performs visual inspection of technology (38% always). See Table 2 for full results.

Table 2

*Frequency of Hearing Technology Management Skills Exhibited by Kindergarten Children*

		Never	Seldom	Sometimes	Mostly	Always	DK	No Response
K n = (13)	Wears technology	0%	0%	0%	8%	92%	0%	0%
	Takes technology on/off	0%	0%	0%	15%	85%	0%	0%
	If technology falls off, will replace	0%	0%	8%	23%	69%	0%	0%
	Notify teacher of technology trouble	0%	8%	15%	23%	46%	8%	0%
	Checks battery	54%	0%	8%	0%	31%	8%	0%
	Replaces battery	23%	8%	0%	8%	38%	15%	8%
	Visual inspection of technology	31%	15%	0%	0%	38%	15%	0%
	Engages in Ling 6	0%	0%	0%	15%	85%	0%	0%
	Reminds teacher of listening check	38%	15%	0%	15%	23%	8%	0%

***First through Third-Grade***

Table 3 shows teacher perceptions of their first-third grade students. Teachers indicated that 83% of their students always wore their hearing technology, 67% were able to take their technology on and off without assistance and, likewise, replace technology that has fallen off. Sixty-seven percent notified their teacher of issues with their hearing technology. One hundred percent of students either mostly or always participated in a Ling 6 sound test, although only 33% mostly reminded their teacher to perform a listening check. For this age group, teachers reported that they either didn't know or hadn't observed their students' skill levels in the

following: ability to check battery, replace battery and perform a visual inspection of hearing technology. See Table 3 for full results.

Table 3

*Frequency of Hearing Technology Management Skills Exhibited by First through Third-Grade Children*

		Never	Seldom	Sometimes	Mostly	Always	DK
1 <sup>st</sup> -3 <sup>rd</sup> n = (6)	Wears technology	0%	0%	0%	17%	83%	0%
	Takes technology on/off	0%	17%	0%	17%	67%	0%
	If technology falls off, will replace	0%	17%	0%	17%	67%	0%
	Notify teacher of technology trouble	0%	0%	0%	33%	67%	0%
	Checks battery	33%	0%	0%	0%	0%	67%
	Replaces battery	17%	0%	0%	0%	0%	83%
	Visual inspection of technology	83%	0%	0%	0%	0%	17%
	Engages in Ling 6	0%	0%	0%	17%	83%	0%
	Reminds teacher of listening check	33%	0%	33%	33%	0%	0%

Analysis of the data on hearing technology management revealed higher percentages across all age groups in areas of management that required a relatively low level of technical skill and responsibility (e.g., wearing technology consistently, removing or replacing technology, participating in Ling 6 sound tests, and notifying or reminding their teacher of hearing related issues). Frequency of skill demonstration was lower in areas that required a greater degree of initiative and technical skill. These areas include: checking battery charge, replacing batteries and performing visual inspections of hearing technology to identify issues.

***FM System Use***

Data on FM system use revealed that 86% of the 64 students evaluated did not currently use an FM system. Of the data collected, 8 preschool students and 1 kindergarten student used an FM system. Of the 8 preschool students who used an FM system, 6 never put on or took off their

FM system independently, and 7 of the 8 never reminded the teacher to use their FM system or place their FM on the charger at the end of the school day. The teacher of the kindergartener who used an FM system reported that he/she seldom put on or took off the FM system independently or charged the FM, but never reminded the teacher to use the FM system.

### **Proactive Listening Behaviors and Social and Academic Self-Advocacy.**

Data were also collected on teacher perceptions of proactive listening behaviors and social and academic self-advocacy skills of their students. These two areas have been combined for conciseness and are outlined for each age group in Tables 4-6.

#### ***Preschool***

Table 4 shows perceived skill levels of preschool students. Thirty-one percent of students never sought to improve their listening environment, while 24% sometimes did. Thirteen percent of students mostly or always sat themselves in the classroom for the best listening and visual advantage, while 29% never or seldom did. More students were observed to always seek clarification from a teacher (18%) than from a peer (13%). Seventy-eight percent of students were mostly or always engaged in classroom discussions and 53% in peer interactions. Teacher perceptions indicated that only 4% of students were capable of explaining their hearing loss to others at an age-appropriate level while 11% were able to explain the role of their hearing technology in helping them hear. See Table 4 for full results.

Table 4

*Frequency of Proactive Listening and Social/Emotional and Academic Self-Advocacy Skills**Exhibited by Preschool Children*

		Never	Seldom	Sometimes	Mostly	Always	DK	N/A
Preschool n = (45)	Seeks to improve listening environment	31%	4%	24%	13%	9%	18%	0%
	Positions for best listening advantage	18%	11%	27%	9%	4%	22%	9%
	Seeks clarification from teacher	24%	20%	22%	16%	18%	0%	0%
	Seeks clarification from peer	29%	22%	18%	16%	13%	2%	0%
	Engages in class discussions	0%	4%	16%	38%	40%	0%	2%
	Engages in peer interactions	2%	2%	24%	24%	29%	11%	7%
	Can explain hearing loss to others	29%	18%	16%	7%	4%	27%	0%
	Can explain hearing technology	24%	24%	11%	7%	11%	22%	0%

***Kindergarten***

As shown in Table 5, 54% of kindergarten students mostly or always sought to improve their listening environment and positioned themselves in the classroom for the best listening and visual advantage. Similar to the preschool students, a higher percentage of students were observed to have always sought clarification from their teacher (46%) over a peer (31%). Seventy-six percent of students mostly or always engaged in class discussions and 62% in interactions with their peers. A higher percentage of kindergarteners mostly or always explained their hearing loss (38%) and technology (46%) to others at an age-appropriate level. See Table 5 for full results.

Table 5

*Frequency of Proactive Listening and Social/Emotional and Academic Self-Advocacy Skills**Exhibited by Kindergarten Children*

		Never	Seldom	Sometimes	Mostly	Always	DK	N/A
K n = (13)	Seeks to improve listening environment	31%	8%	8%	31%	23%	0%	0%
	Positions for best listening advantage	15%	15%	15%	31%	23%	0%	0%
	Seeks clarification from teacher	23%	15%	15%	0%	46%	0%	0%
	Seeks clarification from peer	31%	15%	8%	15%	31%	0%	0%
	Engages in class discussions	0%	8%	15%	38%	38%	0%	0%
	Engages in peer interactions	0%	15%	23%	8%	54%	0%	0%
	Can explain hearing loss to others	15%	23%	0%	15%	23%	23%	0%
	Can explain hearing technology	8%	23%	8%	15%	31%	15%	0%

### ***First through Third-Grade***

Table 6 outlines proactive listening, social and academic self-advocacy skills of first through third-grade children. Thirty-three percent of students were perceived to have mostly sought to improve their listening environment and 83% were capable of always positioning themselves in the classroom for the best listening and visual advantage. Thirty-three percent of students mostly sought clarification from both teachers and peers. Eighty-four percent of students mostly or always engaged in class discussions and 67% in peer interactions. Students in this age group were perceived to have a relatively low ability or likelihood to explain their hearing loss or technology to others who are unfamiliar. See Table 6 for full results.

Table 6

### ***Frequency of Proactive Listening and Social/Emotional and Academic Self-Advocacy Skills***

### ***Exhibited by First through Third-Grade Children***

		Never	Seldom	Sometimes	Mostly	Always	DK	N/A
	Seeks to improve listening environment	0%	17%	50%	33%	0%	0%	0%
	Positions for best listening advantage	0%	0%	0%	17%	83%	0%	0%

1 <sup>st</sup> -3 <sup>rd</sup> n = (6)	Seeks clarification from teacher	17%	17%	33%	33%	0%	0%	0%
	Seeks clarification from peer	17%	17%	33%	33%	0%	0%	0%
	Engages in class discussions	0%	0%	17%	67%	17%	0%	%
	Engages in peer interactions	0%	0%	33%	50%	17%	0%	%
	Can explain hearing loss to others	33%	0%	0%	0%	0%	67%	%
	Can explain hearing technology	33%	0%	0%	33%	17%	17%	%

### **Self-Advocacy Goals in the IEP**

Teachers indicated that 64% of the children they taught do not have self-advocacy goals listed on their Individualized Education Program (IEP). Of the 64 total students evaluated, 7 preschool students, 5 kindergarten students and 5 first through third-grade students had self-advocacy goals listed in their IEP. The majority of preschool students with self-advocacy goals had goals that fell under the category of proactive listening (n = 6). Preschool students also had goals for peer interactions (n = 2), hearing technology management (n = 1), academic support (n = 1) and other (n = 1). Of the 5 kindergarten students with self-advocacy IEP goals, all 5 had goals under the categories of proactive listening, peer interactions and academic supports and 1 with a hearing technology management goal. First through third-grade students with self-advocacy IEP goals had goals in peer interactions (n = 5), proactive listening (n = 4), academic support (n = 3), hearing technology management (n = 1) and other (n = 1).

### **Impact of Self-Advocacy Skills on Academic and Social/Emotional Development**

Qualitative data was also obtained from teacher participants regarding their perceptions of the impact their students' level of self-advocacy skills had on academic and social/emotional development. Teachers were asked to indicate whether or not the child's level of self-advocacy skills impacted their academic and social/emotional development, and to provide a short explanation of their response. Data was returned on (n = 50) students, across all age groups.

Teachers reported that 36% (n = 18) of students did not see negative effects on their academic and social/emotional development as a result of their self-advocacy skills, or in other words, demonstrate age-appropriate self-advocacy skills. The remaining 64% of students (n = 32) demonstrated issues across areas as a result of their level of self-advocacy skills. Of these students, 22% relied on adults to facilitate their communication or did not know how to ask for help, 18% had difficulty with age-appropriate management of hearing technology, 12% exhibited language or pragmatic delays that impacted communication and academic performance and 12% presented with social difficulties as demonstrated by withdrawal from peers or their mimicking behaviors when information was not understood. See Table 7 for examples of teacher verbatim responses for each content category.

Table 7

*Teacher Perceptions on Effect of Self-Advocacy Skills on Academic and Social/Emotional Development*

<b>Does this child's level of self-advocacy skills impact academic and social/emotional development?</b>		
<b>Content Categories</b>	<b>Examples of Verbatim Responses</b>	<b># / %</b>
No: Shows age-appropriate self-advocacy skills	This child will consistently tell me when something isn't working properly. This helps me help ensure she is receiving the full benefit of sound. It is also something she takes ownership of and loves about herself. Because of this, she is able to request clarification from peers and adults and fully have access to academic and peer interactions.	18 (36%)
	This child's level of self-advocacy has a positive impact on academic and social emotional performance. He will answer questions when asked, tell adults and peers about his needs on his own accord and relates well to all adults and peers he normally sees each day.	
Yes: Relies on adults to facilitate communication	Yes, child is quiet, not sure if they heard or understood. Needs help to say 'tell me again' or to recognize that technology is not working.	11 (22%)



interactions; does not know how to ask for help	Absolutely. This child will go the entire day without working hearing aids, or understanding peers/teachers, unless there are designated HA check times and comprehension checks.	
	She tends to gravitate towards adults during social time.	
Yes: Has difficulty with age-appropriate management of hearing technology	There have been several times when the implant falls off (at recess) and she does not notice or care and then it gets lost.	9 (18%)
	Cannot properly put in own hearing aids. She has developed a sore on her outer ear due to improper wearing of ear molds/having hair in the way.	
	Yes. It affected her a lot. She has had a lot of CI issues (dead batteries, head pieces fall off, malfunctioning parts) and never once informed me, and because of that she has been missing a lot. On top of this, she has a second and larger disability, Cerebral Palsy. She has a lot to work on simultaneously and has been so used to being helped. Right now, she is learning to be more independent and letting me know if her headpiece falls off.	
Yes: Language or pragmatic delays that impact communication and academic performance	Low receptive/expressive language impedes self-advocacy skills. But even so, I am concerned with child's lack of general self-advocacy skills.	6 (12%)
	Expressive/receptive language skills are needed to facilitate self-advocacy skills. It is unclear yet if the child's lack of success are due to language or self-advocacy awareness. I suspect both, but language would have to come first.	
	Yes, it truly has adversely affected this child's academic and social/emotional performance. Often this child comes to school either without his hearing aids or with his hearing aids in his backpack. I am working on this issue with Mom. Because it has affected his performance in academic and social/emotional, he is very delayed in all areas. He finally learned the concept of listening checks (Ling 6 sounds), and can verbally identify without using the ring stacker toy. He has a long way to go.	
Yes: Social difficulties; Withdraws from peers or mimics behaviors when information is not understood	Yes. There are times when this child has great self-advocacy skills and asks adults and peers to talk louder or repeat what they said. But there are other times when this child 'zones out' and this scares me because he doesn't ask for clarification. He is going to kindergarten next year and I hope to bridge the gap in his inconsistency. Self-advocacy skills are extremely important for children, especially those with hearing loss!	6 (12%)

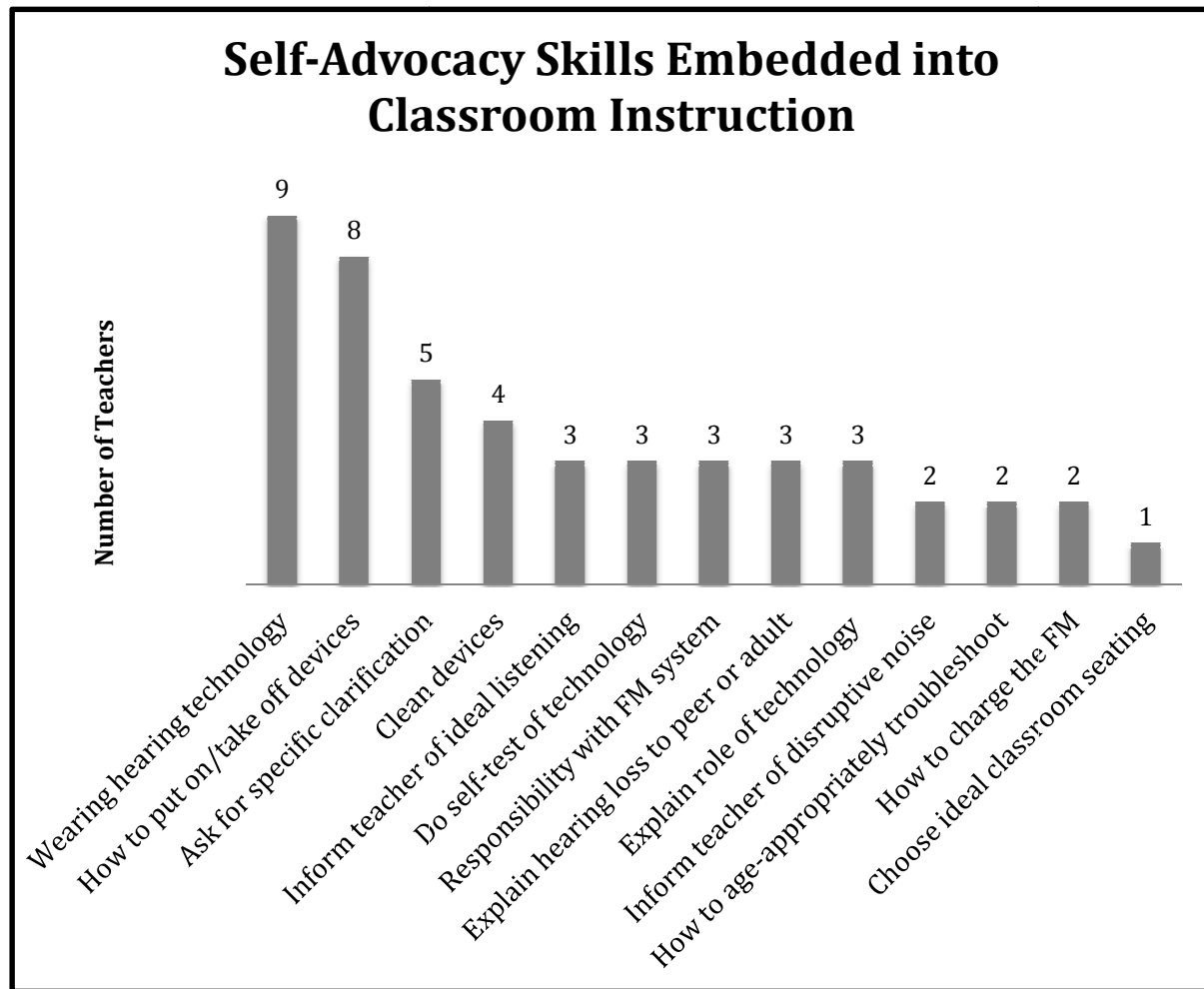
	<p>Yes. This child does not seek clarification with peers or adults. When he doesn't understand something, he just waits and looks confused. This impacts his ability to play with peers in more complex age-appropriate play because when he doesn't understand he either mimics a peer or gets left out. This is also hard for a teacher because sometimes the child's misunderstanding goes unnoticed due to his ability to blend in and mimic peers rather than truly understanding.</p>	
	<p>Child comes across as shy during peer interactions and with unfamiliar adults. Perhaps better self-advocacy skills would also improve social/emotional performance.</p>	

### **Self-Advocacy Instruction.**

Teacher participants were provided a list of self-advocacy skills necessary for young children with hearing loss and were asked to indicate all skills that they currently provided explicit instruction for in their classroom. Ten out of 12 total teacher participants participated in the self-evaluation section. The majority of teachers indicated that they provided instruction in areas of hearing technology management that required relatively low skill-level, such as the importance of consistently wearing hearing technology (n = 9) and how to independently put on and take off devices when needed (n = 8). Other areas of hearing technology management that saw less classroom instruction time included: how to clean devices (n = 4), how to perform a self-test of technology function (n = 3), FM system responsibility (n = 3) and how to age-appropriately troubleshoot their technology (n = 2). Areas of self-advocacy that involved interactions with others or higher levels of expressive communication saw less classroom instruction. See Table 8 for full results.

Table 8

*Self-Advocacy Skills Embedded into Classroom Instruction*



**Teacher Recommendations.**

In the final section of the survey, teachers were given the option to provide recommendations for fellow service-providers of children in other age groups. Preschool teachers were asked to provide recommendations for K-3<sup>rd</sup> grade teachers that related to fostering self-advocacy skill development, and K-3<sup>rd</sup> grade teachers were, in turn, asked to provide helpful information for preschool teachers.

***Preschool Teacher Recommendations***

Preschool teachers who completed the recommendation section tended to provide recommendations that fell within the categories of: transition and planning, responsibility of auditory access, collaboration amongst service-providers, evaluation of student understanding and continued self-advocacy skill instruction. Some examples of verbatim preschool teacher recommendations include:

- “Try to ensure that each adult who works with the child buys into the idea that hearing is paramount – so technology, seating and background noise is everybody’s responsibility.”
- “Continue, continue and continue educating and practicing self-advocacy skills . . . the value of self-advocacy is truly underestimated.”
- “Make yourself available to the child for the child to tell you if something isn't working. Allow the child to take ownership of their device/FM system and don't let it become a burden to you. Empower the child to succeed in your classroom.”
- “Children need direct instruction for how to request clarification of teacher's instructions/procedures if the children miss some of the message or do not have strong enough auditory memory to support their follow-through. Children require mentoring to acquire independence at age-appropriate levels for maintaining their hearing aid usage.”

### ***Kindergarten through Third-Grade Recommendations***

Teachers who served children with hearing loss kindergarten through third-grade provided recommendations that reiterated the importance of fostering independence. Some examples of verbatim kindergarten through third-grade teacher responses include:

- “It is important for kids to independently put on hearing devices.”
- “Give opportunities for children to ask more questions.”
- “Teach names for ear mold, tube, hearing aid, processor, operation and audiologist.”

### **Study Limitations**

An analysis of the demographics of this study revealed some limitations. The amount of students evaluated were not distributed evenly across all age groups, with a high number of returned surveys from preschool teachers, with lower numbers of kindergarten and first through third-grade students being represented. The uneven distribution of ages can likely be accounted for by the fact that a high number of children who are DHH who participate in self-contained LSL preschools eventually transition into mainstream educational settings following preschool or kindergarten to learn alongside typical hearing peers. As this study only sought perceptions of teachers in self-contained LSL settings, there were consequently fewer older students who fit qualifying criteria. Understanding within the topic of self-advocacy skills and needs of children with hearing loss would benefit from a study of these children following transition into mainstream settings.

### **Discussion**

The results of this study revealed the levels of self-advocacy skills of young children with hearing loss across different age groups, areas of weakness in skill sets and components of self-advocacy instruction. Results of children in first through third-grade settings should not be generalized, as it cannot be assumed that all children in this age range who are DHH demonstrate low levels of self-advocacy skills. A closer look at the number of participants in this age range reveals relatively low contribution to the overall data. Additional research on this age group is needed in order to draw accurate conclusions.

Survey results indicated that a low percentage of children across age groups (24%) had self-advocacy goals included in their IEPs. This finding is particularly important when paired with the information that 64% of students were perceived to experience negative impacts on their

social/emotional and academic development as a consequence of their level of self-advocacy skills. Likewise, data revealed a measurable correlation between skills explicitly taught and fostered within the classroom and levels of skill proficiency in children. The ‘importance of wearing hearing technology consistently’ and ‘how to put on/take off devices independently’ were indicated as the most frequently taught skills in self-advocacy classroom instruction. Similarly, these components of hearing technology management were among the most frequently demonstrated skills amongst the three categories of self-advocacy skills across each age group. Furthermore, skills that required a lower level of technical skill, personal responsibility and expressive communication (e.g., wearing hearing technology consistently, putting on/taking off hearing technology, participating in listening checks) were found to be exhibited more consistently by a higher number of children than self-advocacy skills that required higher levels of personal responsibility, technical skill, expressive communication or required the student to interact with others (e.g., seeking clarification from peers or adults, the ability to explain hearing loss or role of technology to others, the ability to check and replace hearing technology batteries when needed, etc.). This gap in skill level is important for teachers to consider when implementing self-advocacy instruction. Also, from the data, it can be assumed that children were provided with authentic opportunities to practice skills applicable to their current, self-contained, educational setting (e.g., the importance of wearing hearing technology consistently, how to put on/take off hearing technology and notify teacher of technology trouble) while opportunities to practice skills required for full participation and auditory access in inclusive, mainstream settings (e.g., how to remind teacher to perform listening check, how to position self in the classroom for the best auditory/visual advantage) were more likely to be overlooked. All children with hearing loss, regardless of whether or not they have current plans to mainstream,

should be given authentic opportunities to practice these developmentally appropriate self-advocacy skills as they are critical for current and future social/emotional development and academic success.

Results of this study do not provide information on children who are DHH that access language through modalities other than LSL and, furthermore, do not provide information on children who have transitioned into inclusive general education settings. Additional studies designed to evaluate the level of self-advocacy skills maintained by this special population of children, particularly the type and level of proficiency of skills carried over into inclusive general education settings, would provide additional valuable information on the topic.

### **Conclusions**

Children benefit when teachers foster age-appropriate self-advocacy skill development in their students across all self-advocacy priority areas and remain mindful that the level of self-advocacy skills attained in early childhood serve as a foundation for later success. Proper tools, such as developmental checklists, can be used to identify areas of weakness in students' levels of self-advocacy skills and can aid in IEP goal development and classroom instruction planning. Age-appropriate self-advocacy skills are important for all children who are DHH to possess, regardless of educational setting, but become particularly critical when children enter inclusive, general education settings, as unfamiliar teachers and students may not be sensitive to their needs. Self-advocacy skills needed in current educational settings as well as those necessary in future settings should be considered and implemented into classroom instruction, and children should be provided with authentic opportunities to practice and develop these skills in order to fully participate in social and academic experiences and prepare for effective transition.

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